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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/580,472

05/24/2006

Keiichi Kondo

2006_0699A

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EXAMINER

THOMAS, ERIC W

ART UNIT

PAPER NUMBER

2831

MAIL DATE

DELIVERY MODE

01/15/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/580,472

Applicant(s)

KONDO ET AL.

Examiner

Eric Thomas

Art Unit

2831

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 24 May 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 21-46 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 21-24, 28-35, 39-42 and 46 is/are allowed.
- 6) ☒ Claim(s) 43-45 is/are rejected.
- 7) ☒ Claim(s) 25-27, 36-38 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 24 May 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date 5/06.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____.

DETAILED ACTION

Specification

1. The lengthy specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

Claim Objections

2. Claims 25-27, 36-38 are objected to because of the following informalities:

Claim 25, line 1, replace the first occurrence of "The" with --A--.

Claim 26, line 1, replace the first occurrence of "The" with --A--.

Claim 27, line 1, replace the first occurrence of "The" with --A--.

Claim 36, line 1, replace the first occurrence of "The" with --A--.

Claim 37, line 1, replace the first occurrence of "The" with --A--.

Claim 38, line 1 replace the first occurrence of "The" with --A--.

Appropriate correction is required.

Claim Rejections - 35 USC § 102

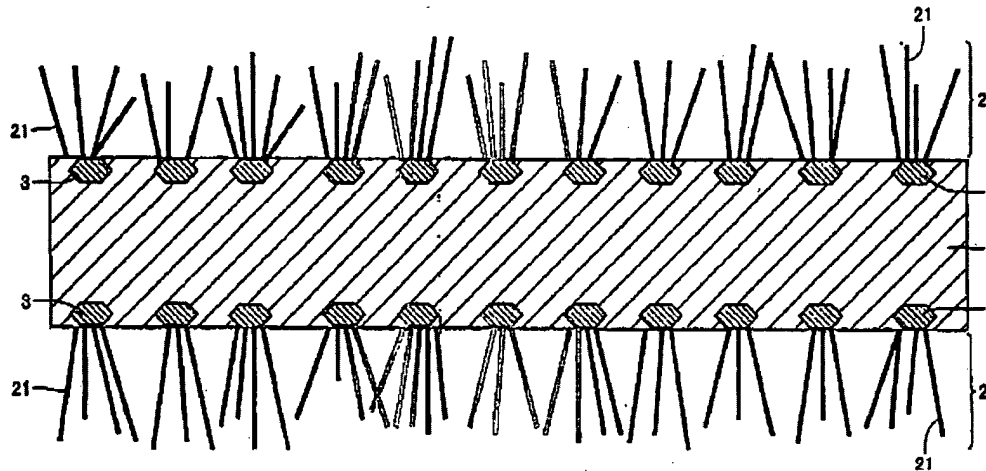
3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States

only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. Claim 43 is rejected under 35 U.S.C. 102(e) as being anticipated by Ro et al. (US 20060172134).



Ro et al. disclose in fig. 1, a method for manufacturing an electric double-layer capacitor comprising a case, an element, a separator and an electrolytic solution, the element being composed of a pair of polarizable electrodes, which are one of being wound and laminated with a separator disposed therebetween, and the element being sealed in the case with the electrolytic solution, the method comprising: applying carbon to an aluminum foil which is an electrode material; and heating the aluminum foil with carbon applied thereto to a temperature at which the aluminum foil and the carbon are alloyed, thereby forming an alloy of carbon and aluminum onto a surface of the electrode material (see example 15).

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

7. Claim 44 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ro et al. (US 20060172134).

Ro et al. disclose the claimed invention except for the alloy contains carbon and aluminum in a ratio of 3:4. It would have been obvious to one having ordinary skill in the art at the time the invention was made to form the electrode with an alloy that contains carbon and aluminum in a ratio of 3:4, since it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art. *In re Boesch*, 617 F.2d 272, 205 USPQ 215 (CCPA 1980).

8. Claim 45 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ro et al. (US 20060172134) in view of Imoto et al. (JP 04-065814).

Ro et al. disclose in fig. 1, a method for manufacturing an electric double-layer capacitor comprising a case, an element, a separator and an electrolytic solution, the

element being composed of a pair of polarizable electrodes, which are one of being wound and laminated with a separator disposed therebetween, and the element being sealed in the case with the electrolytic solution, the method comprising: applying carbon to an aluminum foil which is an electrode material; and heating the aluminum foil with carbon applied thereto to a temperature at which the aluminum foil and the carbon are alloyed, thereby forming an alloy of carbon and aluminum onto a surface of the electrode material (see example 15).

Ro et al. disclose the claimed invention except for the method comprising the step of applying the carbon material onto an aluminum foil by one of vacuum deposition, sputtering and CVD.

Imoto et al. teach that sputtering a material onto a substrate produces a film having a uniform thickness.

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify the method of Ro et al. by sputtering the carbon material onto the aluminum foil, since such a modification would produce a carbon layer having a uniform thickness.

Allowable Subject Matter

9. Claims 21-24, 28-35, 39-42, 46 are allowed.

10. The following is a statement of reasons for the indication of allowable subject matter: The prior art does not teach or suggest (in combination with the other claim limitations) an electric double layer capacitor wherein the at least one of the electrode foils is coated on front and rear sides thereof with aluminum fluoride by applying

carbon material to the front and rear sides of the at least one of the electrode foils, and then substituting hydrophobic groups for at least a part of hydrophilic groups of the carbon material (claims 24-31); an electric double layer capacitor wherein the electrode foils are coated on front and rear sides thereof with aluminum fluoride by applying carbon material to the front and rear sides of the electrode foils, and then substituting hydrophobic groups for at least a part of hydrophilic groups of the carbon material (claims 32-42); and a method for manufacturing an electric double layer capacitor wherein the method comprises the step of heating the carbon foil with aluminum applied thereto to a temperature at which the carbon foil and the aluminum are alloyed, thereby forming an alloy of carbon and aluminum onto a surface of the electrode material (claim 46).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Eric Thomas whose telephone number is 571-272-1985. The examiner can normally be reached on Monday - Friday 5:30 AM - 2:00 PM.

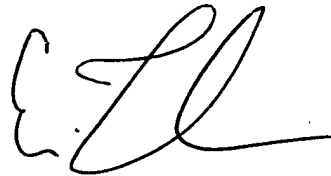
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Diego Gutierrez can be reached on 571-272-2245. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

ewt

A handwritten signature in black ink, appearing to read 'E. Thomas', with a stylized flourish extending from the end.

Eric Thomas
Primary Examiner – 2831